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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,680	09/23/2003	Lewis M. Nashner	469/132	1246

2101   7590   01/12/2005

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EXAMINER
LAU, TUNG S

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/668,680	NASHNER, LEWIS M.
	Examiner	Art Unit	
	Tung S Lau	2863	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18 and 20-24</u> is/are rejected.

7)☒ Claim(s) <u>19</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

     1.☐ Certified copies of the priority documents have been received.

     2.☐ Certified copies of the priority documents have been received in Application No. _____.

     3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Kadlec et al. (U.S. Patent 6,347,018).

Regarding claim 1:

Kadlec discloses a system for detecting a screening-test error, the system

comprising: a measurement device that measures at least one performance

parameter related to at least one screening-test task (abstract); and a

computational device (fig. 1b, unit 110), in communication with the measurement

device (fig. 1b, unit 130), that receives the at least one measured performance

parameter (fig. 3, unit 318), calculates at least one performance statistical

quantity characterizing the measured performance parameter (fig. 3, unit 318),

and compares the at least one performance statistical quantity to at least

one reference statistical quantity associated with an error-free screening test (fig.

3, unit 312, 318, Col. 14, Lines 19-31).

Regarding claim 3:

Kadlec discloses a system for detecting errors in balance related screening tests, the system comprising: a force-plate for measuring a quantity related to a stability factor of a balance task performed in trials by a subject under a plurality of distinct sensory conditions (Col. 4, Lines 10-40) ; and a computation device in communication with the force-plate (Col. 4-5, Lines 10-4), the computational device (i) receiving the quantity related to the stability factor for each trial (Col. 4-5, Lines 10-4), (ii) determining a rank order for the quantities, each quantity for each trial being associated with a rank (Col. 4-5, Lines 10-4, fig. 3, unit 318, 326, fig. 11, unit 1108-1140), and (iii) determining if any of the ranks associated with a given one of the trials has fallen outside a reference range associated with the given trial performed under error-free conditions (Col. 3, Lines 3-33, Col. 4-5, Lines 10-4).

Regarding claim 5:

Kadlec discloses a method for detecting a screening-test error, the method comprising: measuring at least one performance parameter related to at least one screening-test task (Col. 4, Lines 10-40); and calculating at least one performance statistical quantity characterizing the measured performance parameter (Col. 4, Lines 10-40); and comparing the at least one performance statistical quantity to at least one reference statistical quantity associated with an error-free screening test (Col. 13-14, Lines 62-30).

Regarding claim 17

Kadlec discloses a method for detecting errors in balance related screening

tests, the method comprising: measuring a quantity related to a stability factor of

a balance task performed in trials by a subject under a plurality of distinct

sensory conditions (Col. 4, Lines 10-40); obtaining thereby the quantity related to

the stability factor for each trial; determining a rank order for the quantities, each

quantity for each trial being associated with a rank (Col. 4, Lines 10-40, fig. 21b,

20c, 23a); and determining if any of the ranks associated with a given one of the

trials has fallen outside a reference range associated with the given trial

performed under error-free conditions (Col. 4, Lines 10-40, fig. 21b, 20c, 23a,

20b, Col. 13-14, Lines 62-31).

Regarding claim 2, 4, Kadlec further discloses a display to display performance

data (Col. 9, Lines 3-21, fig. 18b, fig. 25-27); Regarding claim 6, Kadlec further

discloses an average value (Col. 2, Lines 35-57); Regarding claim 7, Kadlec

further discloses a standard deviation (Col. 17, Lines 25-34); Regarding claim 8,

Kadlec further discloses standard error (abstract); Regarding claim 9, Kadlec

further discloses associated with power spectrum (fig. 23a); Regarding claim 10,

Kadlec further discloses root mean square (Col. 20, Lines 27-36); Regarding

claim 11, Kadlec further discloses associated with frequency (fig. 23a););

Regarding claim 12, Kadlec further discloses screening-test task is a balance

task (Col. 2, Lines 35-57); (ii) the at least one performance parameter is sway

deviation (Col. 2, Lines 35-57, Col. 4, Lines 10-67), (iii) the at least one

performance statistical quantity corresponds to a moving window root mean

square value for velocity of the sway deviation (Col. 20, Lines 27-36), and (iv)

comparing the at least one performance statistical quantity to the at least one

reference statistical quantity includes determining whether the moving window

root mean square value deviates from a constant value by a predetermined

threshold value (Col. 20, Lines 27-36, fig. 30); Regarding claim 13, Kadlec further

discloses (i) the screening-test task is a balance task (Col. 2, Lines 35-57); (ii)

the at least one performance parameter is vertical force applied to a force plate

(Col. 2, Lines 35-57, Col. 4, Lines 10-67); (iii) the at least one performance

statistical quantity corresponds to a moving window average value for total

vertical force applied to the force plate(Col. 2, Lines 35-57, Col. 4, Lines 10-67),

and (iv) comparing the at least one performance statistical quantity to the at least

one reference statistical quantity includes determining whether the moving

window average value deviates from a constant value by a predetermined

threshold value (Col. 2, Lines 35-57, fig. 30).

Regarding claim 14, Kadlec further discloses (i) the screening-test task is a

balance task (Col. 2, Lines 35-57); (ii) the at least one performance parameter is

vertical force applied to a force plate (Col. 2, Lines 35-57, Col. 4, Lines 10-67),

(iii) the at least one performance statistical quantity corresponds to an average of

a mathematical derivative of the total vertical force applied to the force plate (Col.

2, Lines 35-57); and (iv) comparing the at least one performance statistical

quantity to the at least one reference statistical quantity includes determining

whether the average deviates from zero by a predetermined threshold value (Col. 2, Lines 35-57, fig. 30).

Regarding claim 15, Kadlec further discloses (i) the screening-test task is a balance task (Col. 2, Lines 35-57); (ii) the at least one performance parameter is horizontal force applied to a force plate (Col. 2, Lines 35-57, Col. 4, Lines 10-67); (iii) the at least one performance statistical quantity corresponds to an average of a mathematical derivative of the total horizontal force applied to the force plate (Col. 2, Lines 35-57); and (iv) comparing the at least one performance statistical quantity to the at least one reference statistical quantity includes determining whether the average deviates from zero by a predetermined threshold value (Col. 2, Lines 35-57, fig. 30); Regarding claim 16, Kadlec further discloses displaying the extent to which the at least one performance statistical quantity differs from the at least one reference statistical quantity on a display device (Col. 9, Lines 3-21, fig. 18b, fig. 25-27, fig. 3, unit 318, 312, 314, 342);); Regarding claim 18, Kadlec further discloses fallen outside range (fig. 30, unit 2830, 2832); Regarding claim 20, Kadlec further discloses rank order according to difficult level (fig. 30, 2834, 2836, 2837, 2838).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

a. Claims 21, 22, 23 and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kadlec et al. (U.S. Patent 6,347,018).

Regarding claim 21

Kadlec discloses a method for detecting a screening test error in an individual

trial of a balance task during which sway deviation is measured, the method

comprising: determining a quantity corresponding to a moving window root mean

square value for velocity of the sway deviation (Col. 13-14, Lines 63-31), the

window being short in relation to the duration of the trial but long in relation to the

duration of a typical deviation in sway velocity (fig. 20b, 21b, 23a, fig. 27, 25);

and when the quantity exceeds a threshold value (fig. 20b, 21b, 23a, fig. 27, 25).

Regarding claim 22

Kadlec discloses a method for detecting a screening test error due to

malfunctions of at least one vertical force sensing device, the method comprising:

determining a quantity corresponding to a moving window average value for the

total vertical force measured by the device (Col. 78, Lines 1-35, Col. 3-4, Lines

10-67), the window being long in relation to the duration of expected

spontaneous fluctuations in the total vertical force; the quantity deviates from a

constant valued by a predetermined threshold value (fig. 20b, 21b, 23a, fig. 27,

25).

Regarding claim 23

Kadlec discloses a method for detecting a screening test error due to

malfunctions of at least one vertical force sensing device, the method comprising:

calculating an average of a mathematical derivative for the total vertical force

measured by the device to determine the rate of change of the total vertical force

(Col. 78, Lines 1-35, Col. 3-4, Lines 10-67), determining a quantity corresponding

to an average rate of change of the total vertical force over a predetermined

period of time (fig. 27); when the average deviates from zero by a predetermined

threshold value (Col. 78, Lines 1-35, Col. 3-4, Lines 10-67).

Regarding claim 24

Kadlec discloses a method for detecting a screening test error due to

malfunctions of at least one horizontal force sensing device, the method

comprising: calculating an average of a mathematical derivative for the total

horizontal force measured by the device to determine the rate of change of the

total horizontal force (Col. 78, Lines 1-35, Col. 3-4, Lines 10-67), determining a

quantity corresponding to an average rate of change of the total horizontal force

over a predetermined period of time; and the average deviates from zero by a

predetermined threshold value (Col. 78, Lines 1-35, Col. 3-4, Lines 10-67).

Kadlec does not disclose enter an alarm state, but it would have been obvious to

one of ordinary skill in the art at the time the invention was made to modify

Kadlec to have the alarm state in order to be able to notify the users the state of

the error and not slow down the operation of the disk (Col. 2, Lines 58-63).

Claim Objections

3.   Claim 19 is objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all the limitation of

the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to

teach CTSIB protocol.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tung S Lau whose telephone number is 571-272-

2274. The examiner can normally be reached on M-F 9-5:30. If attempts to

reach the examiner by telephone are unsuccessful, the examiner's supervisor,

John Barlow can be reached on 571-272-2269. The fax phone numbers for the

organization where this application or proceeding is assigned is 703-872-9306

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

TL

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